

OPERATING SUMMARY

WALLACEBURG

WATER POLLUTION CONTROL PLANT

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WALLACEBURG

WATER POLLUTION CONTROL PLANT

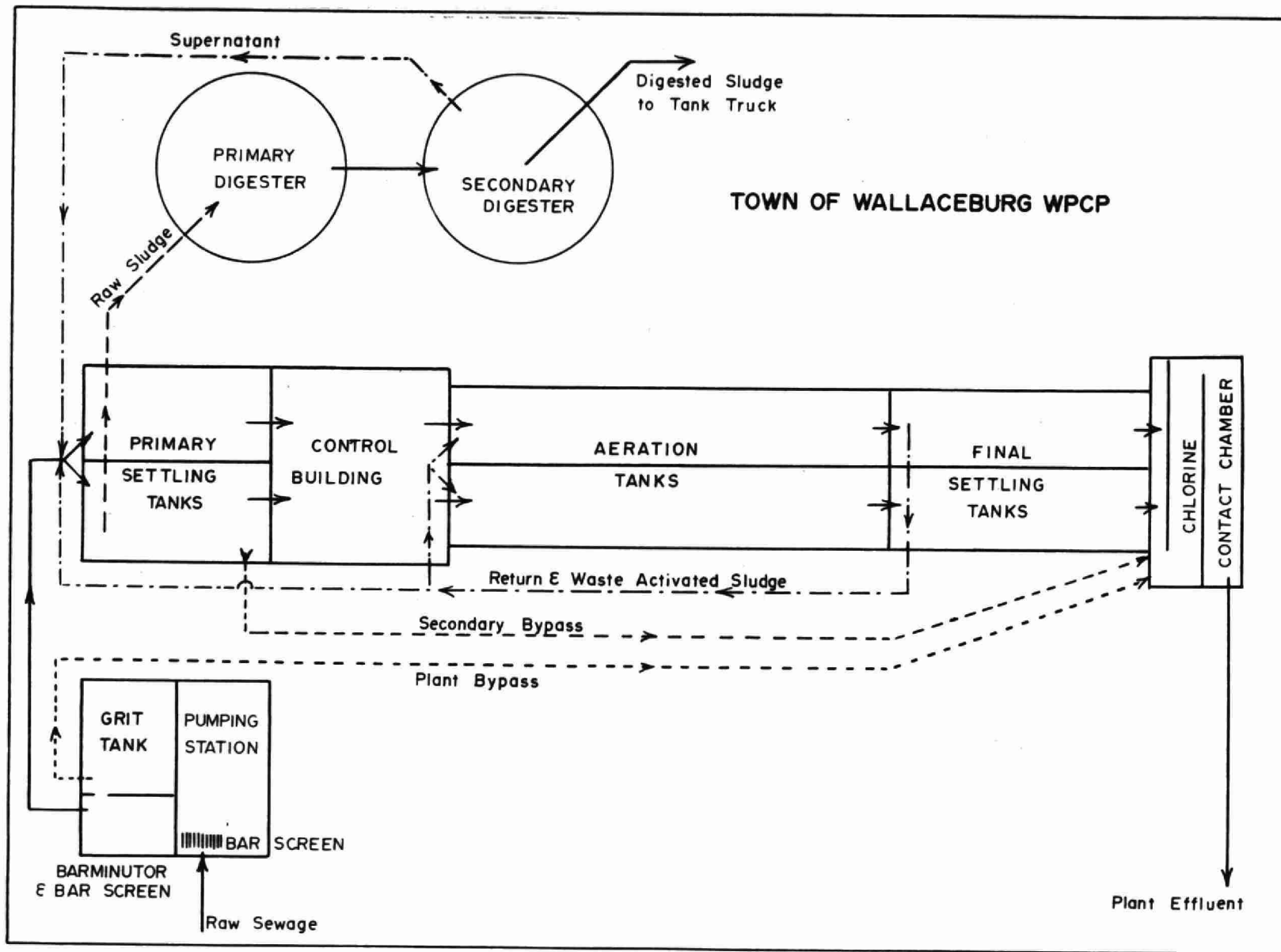
MINISTRY OF THE ENVIRONMENT

1973 ANNUAL OPERATING SUMMARY

prepared by
Plant Performance Unit
TECHNICAL SERVICES BRANCH
T. Cross, Director

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DESIGN DATA

PROJECT Town of Wallaceburg WPCP

PROJECT NO. 1-0087-67
DESIGN POPULATION 13,500
DESIGN LOADING 1.5 IMGD
DESIGN BOD LOADING 3,000 lb/day
DESIGN SS LOADING 3750 lb/day

COMMINUTION

No. of units - 1
Type: Barminutor

GRIT REMOVAL

No. of tanks - 1
Type: Aerated by diffusers

PRIMARY SEDIMENTATION

No. of tanks - 2
Tank dimensions: 16'x48'x14.5' each
Detention: 2.22 hours

AERATION

No. of tanks - 2
Type: aerated by diffusers
Tank dimensions: 16'x106'x13.25' each
Detention: 4.49 hours

SECONDARY SEDIMENTATION

No. of tanks - 2
Tank dimensions: 72'x16'x12.5' each
Detention: 2.68 hours

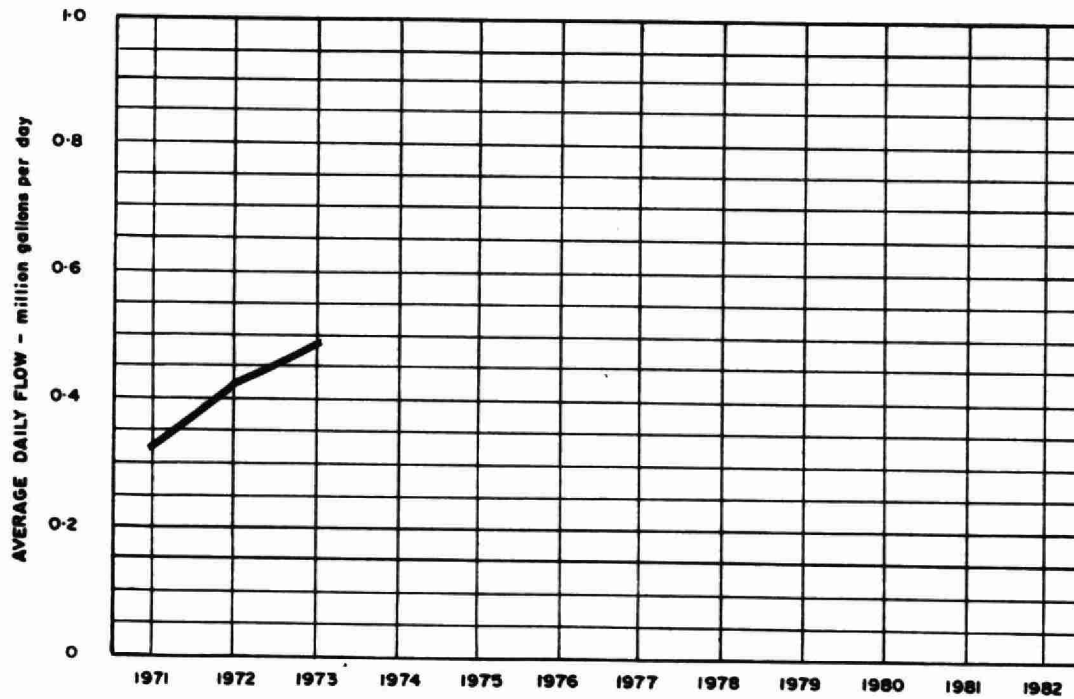
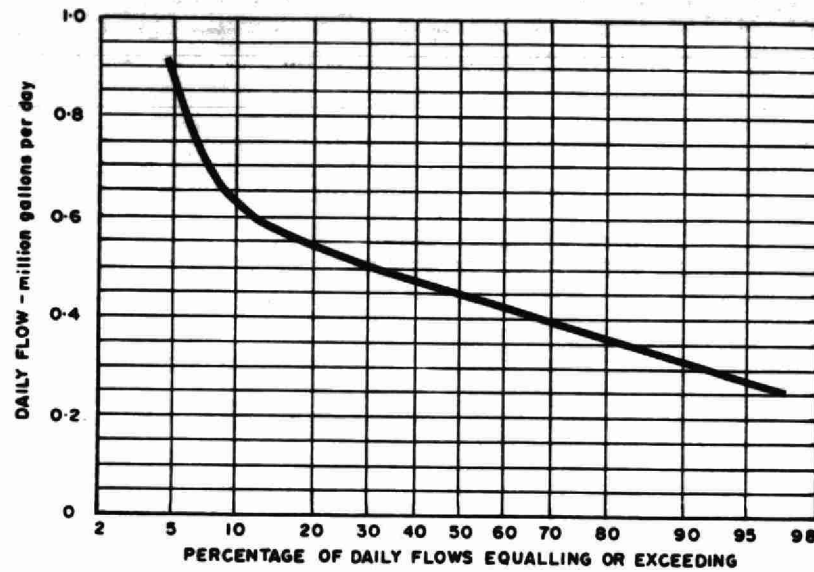
CHLORINATION

No. of tanks - 1
Detention: 21.8 min.

SLUDGE DIGESTION

No. of tanks - 2
Tank dimensions: one @ 35' dia x 19'
one @ 35' x 18.5'
Total Detention: 21.1 days

PROCESS DATA FLOWS

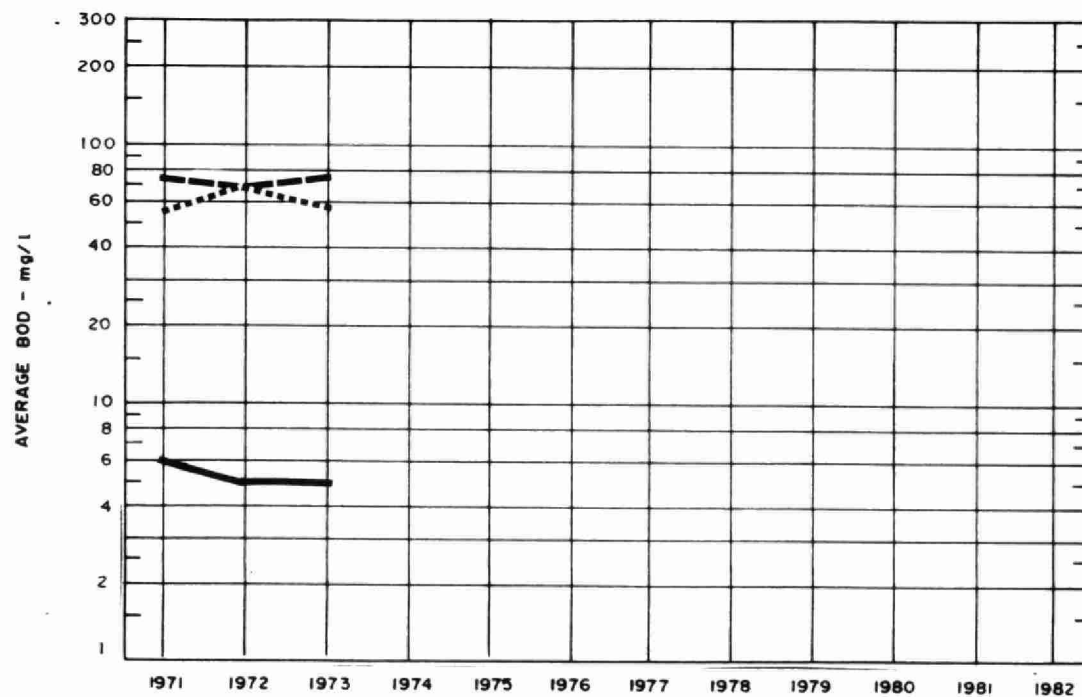
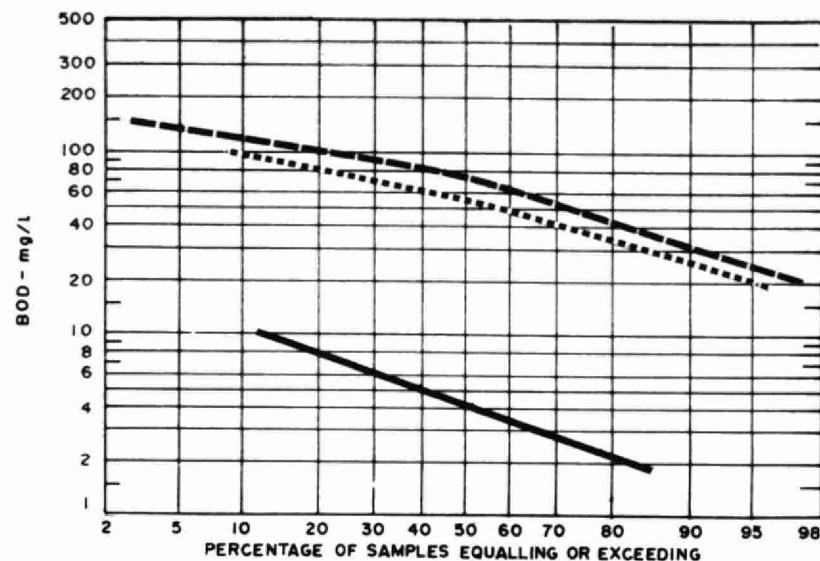


DESIGN CAPACITY 1.5 MGD

PLANT PERFORMANCE

MONTH	FLOWS			BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				PHOSPHORUS	
	TOTAL FLOW million gallons	AVERAGE DAY mil. gal	MAXIMUM DAY mgd	INFLUENT mg/l	EFFLUENT mg/l	REDUCTION		INFLUENT mg/l	EFFLUENT mg/l	REDUCTION		INFLUENT mg/l P	EFFLUENT mg/l P
						%	10 ³ pounds			%	10 ³ pounds		
JAN	13.5	0.44	1.1	70	6	91	8.7	77	10	87	9.1	3.6	3.7
FEB	12.3	0.44	0.6	85	8	91	9.5	83	13	84	8.6	5.6	1.3
MAR	28.2	0.91	2.8	57	7	88	14.1	107	29	73	22.0		
APR	15.5	0.52	1.0	54	7	87	7.3	62	10	84	8.1	3.5	2.1
MAY	13.6	0.44	0.5	79	3	96	10.3	87	9	90	10.6		
JUNE	18.8	0.63	2.2	72	5	93	12.6	86	3	97	15.6	3.6	1.7
JULY	15.7	0.51	0.7	41	4	90	5.8	85	4	95	12.7	3.2	2.4
AUG	12.3	0.40	0.5	96	2	98	11.6	93	3	97	11.1		
SEPT	9.2	0.30	0.4	119	3	97	10.6	93	4	96	8.1		
OCT	8.9	0.29	0.5	90	5	94	7.5	116	4	97	9.9	6.2	4.8
NOV	14.1	0.47	1.1	75	3	96	10.1	127	6	95	17.0	4.2	2.6
DEC	18.5	0.60	1.2	67	3	96	11.8	88	5	94	15.3		
TOTAL	180.6	-	-	-	-	-	119.9	-	-	-	148.1	-	-
AVG.		0.49	MAXIMUM 2.8	76	5	93	10.0	92	8	91	12.3	4.3	2.4
No. of Samples	-	-	-	59	59	-	-	266	272	-	-	9	9

BIOCHEMICAL OXYGEN DEMAND

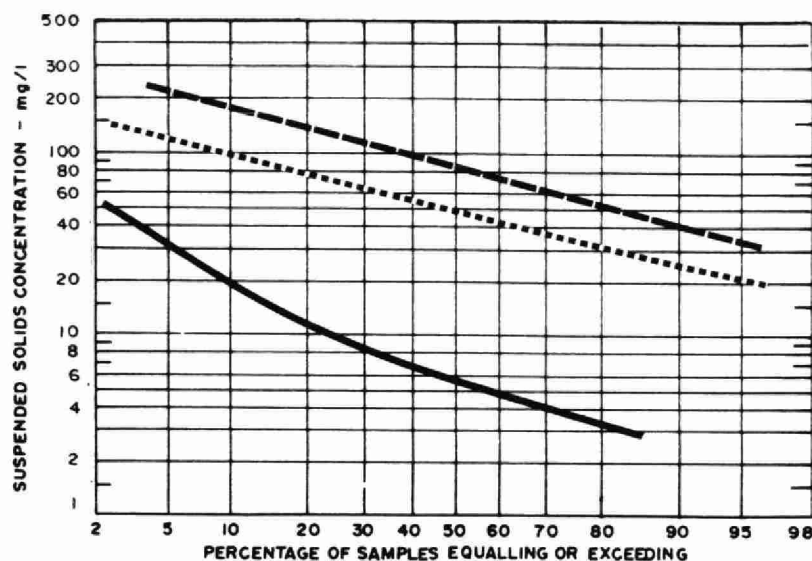


PLANT INFLUENT - - - - -

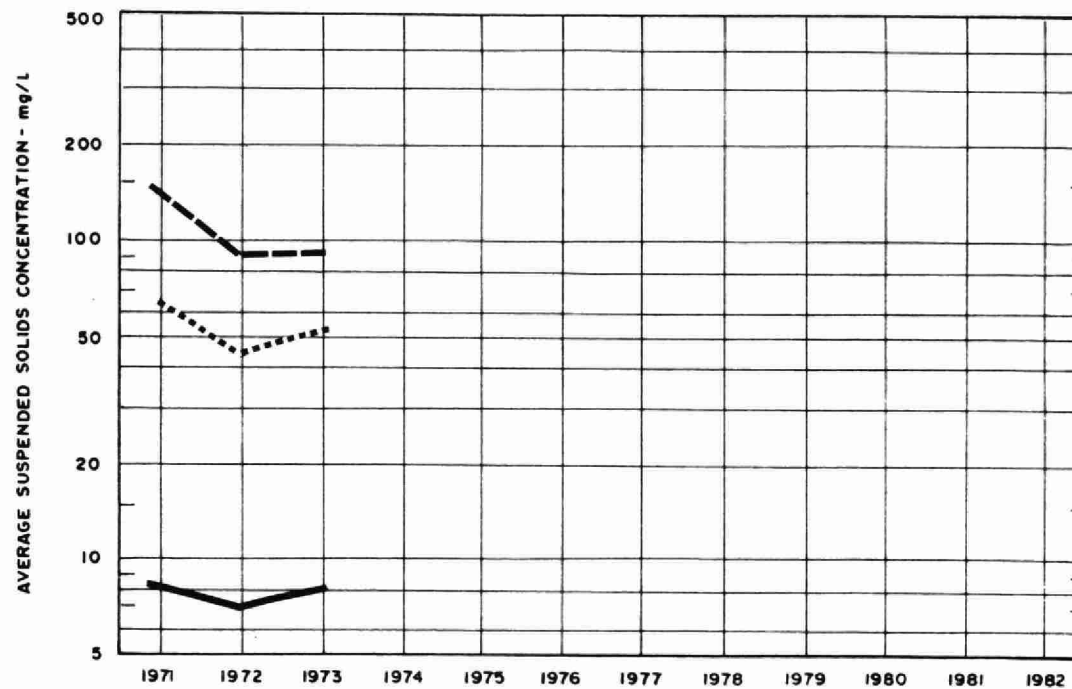
PRIMARY EFFLUENT

PLANT EFFLUENT —————

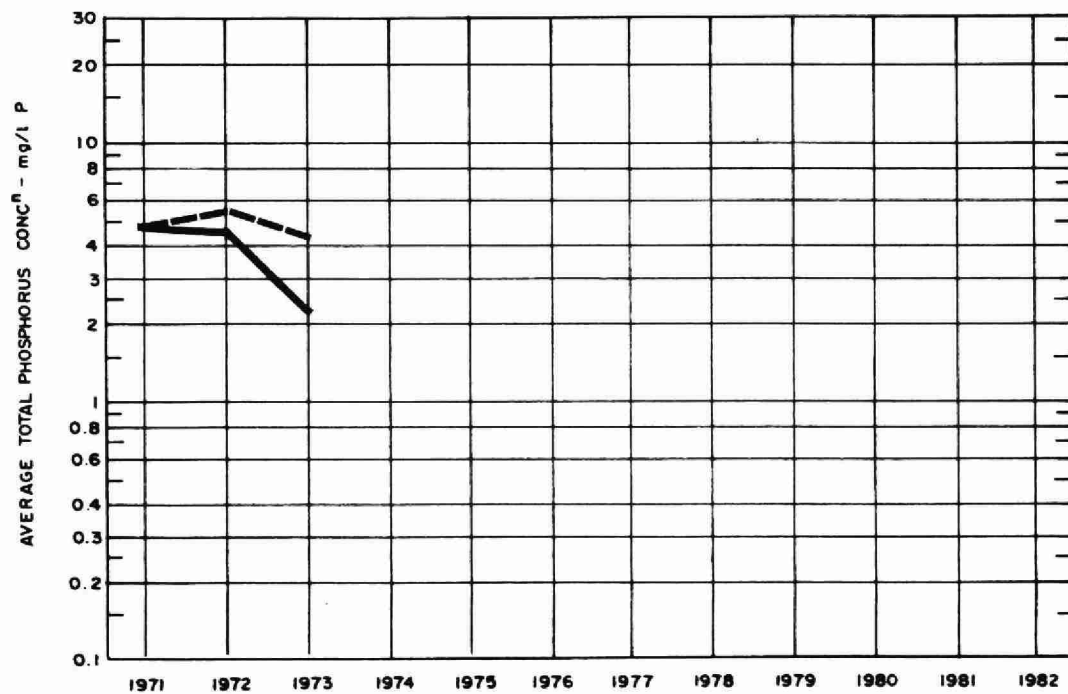
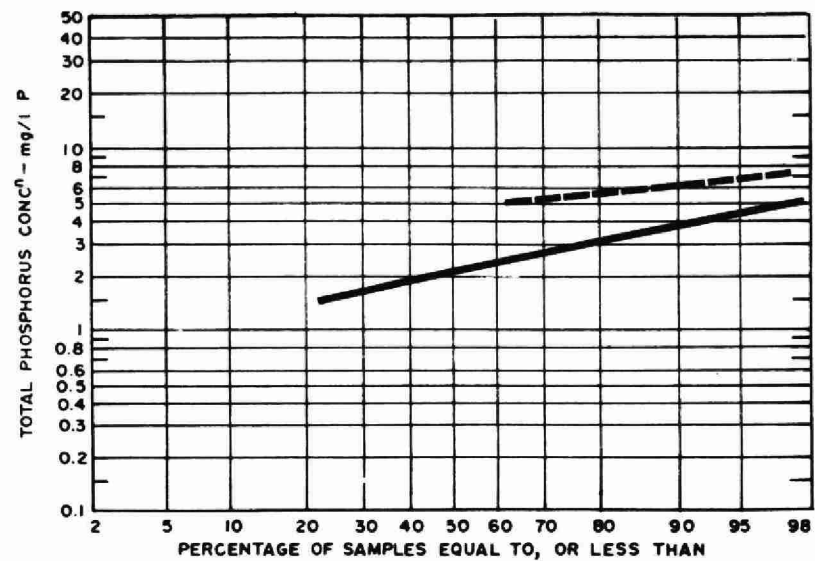
SUSPENDED SOLIDS



PLANT INFLUENT - - - - -
 PRIMARY EFFLUENT
 PLANT EFFLUENT _____



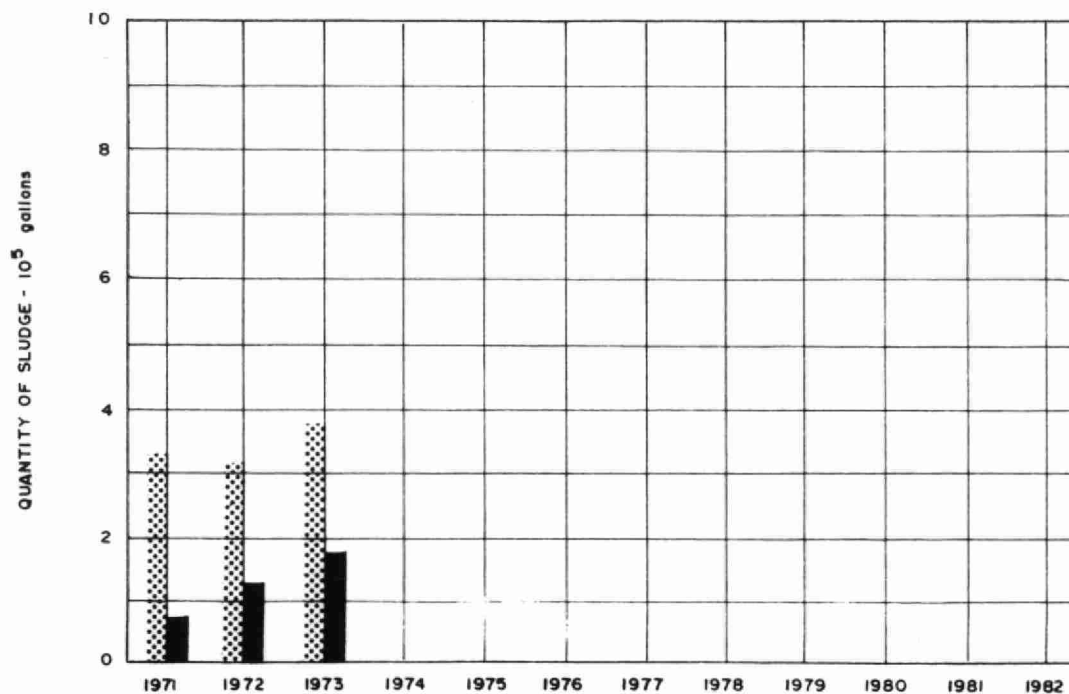
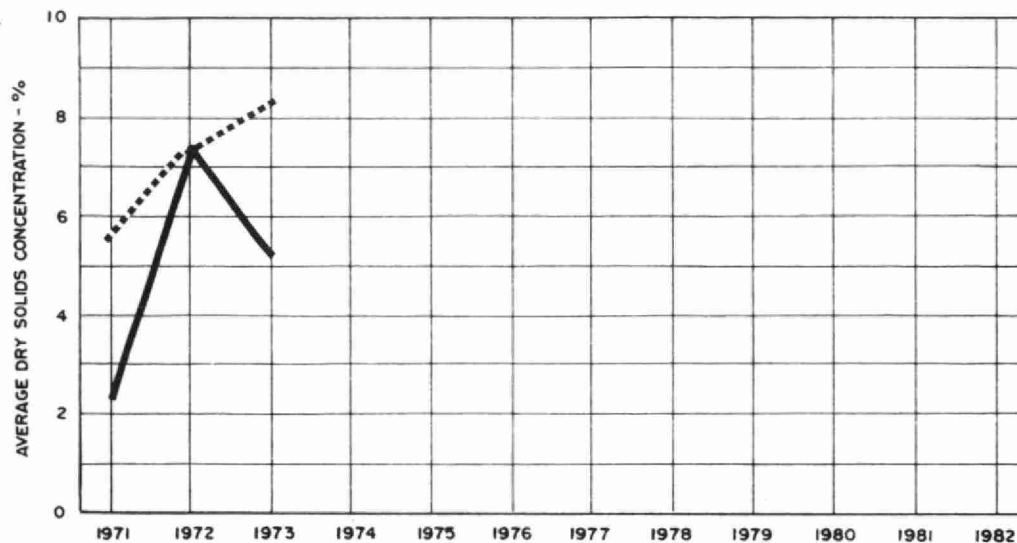
PHOSPHORUS



PLANT INFLUENT -----
PLANT EFFLUENT _____

DIGESTION

RAW SLUDGE
DIGESTED SLUDGE —————



RAW SLUDGE TO DIGESTER
DIGESTED SLUDGE REMOVED —————

TREATMENT DATA

MONTH	GRIT	CHLORINATION		PRIMARY EFFLUENT		AERATION			SLUDGE DIGESTION and DISPOSAL							
	QUANTITY REMOVED cubic feet	CL ₂ USED pounds	AVG. DOSE mg/l	BOD mg/l	SUSPENDED SOLIDS mg/l	MLSS CONC mg/l	F/M day ⁻¹	AIR 1000 ft ³ lb BOD	RAW SLUDGE			DIGESTED SLUDGE			SUPER- NATANT T. S. %	AMOUNT HAULED cubic yards
									QUANTITY 10 ³ gallons	TOTAL SOLIDS %	VOL. SOLIDS %	QUANTITY 10 ³ gallons	TOTAL SOLIDS %	VOL. SOLIDS %		
JAN	0	1230	9.1	52	52	1690	0.10	7.9	33	7.6	41	5	8.9	44		32
FEB	6	570	4.6	63	46	1090	0.18	6.6	36	12.5	24	38	7.5	33		224
MAR	62	1140	4.0	20	83	2100	0.06	11.8	31	17.1	16	0				0
APR	0	1280	8.3	51	49	2000	0.09	6.1	23	13.6	30	0				0
MAY	60	720	5.3	51	43	1640	0.10	8.0	29	6.1	51	4	2.4			24
JUNE	0	790	4.2	44	50	1750	0.11	6.5	31	7.5	45	14	3.9	41		84
JULY	0	600	3.8	53	39	1250	0.15	6.0	36	5.8	45	26				156
AUG	36	630	5.1	67	34	1090	0.17	5.8	31	5.6	54	16	5.5	41		96
SEPT	0	460	5.0	80	39	1100	0.15	6.9	24	5.3	62	14	4.6	44		84
OCT	0	480	5.5	84	53	1190	0.14	6.5	17	5.0	56	14	3.4	40		84
NOV	84	650	4.6	81	76	1450	0.19	6.2	42	6.9	42	18	4.4	41		108
DEC	0	460	4.1	48	57	1210	0.17	5.5	48	6.4	49	30	6.4	39		180
TOTAL	248	9010	-	-	-	-	-	-	381	-	-	179	-	-	-	1072
AVG.	1.4 cu ft/mil gal	750	5.0	59	52	1460	0.13	7.0	32	8.3	43	18	5.2	40		107

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